

WHAT IS CLAIMED IS:

1 1. A system for modifying digital images, the system comprising means for
2 maintaining an association between an image portion and a list of operations used to create
3 the image portion.

1 2. A method for processing an image in an application program, wherein
2 the application program executes in a digital system, wherein the digital system includes a
3 user input device, the method comprising
4 accepting signals from the user input device to cause one or more operations
5 to modify the image to create a modified image;
6 creating a list of at least one of the operations used to create the modified
image; and
7 storing the list in association with the modified image.

1 3. The method of claim 2, further comprising
2 retrieving the modified image;
3 retrieving the list; and
4 associating the list with the modified image.

1 4. A method for modifying a diagram of connected nodes displayed on a
2 display device in a digital system, wherein the nodes are connected with elongated
3 connectors, wherein the digital system includes a user input device and a processor, the
4 method comprising
5 accepting first signals from the user input device to remove an end of a
6 connector from a first node;
7 accepting second signals from the user input device to move the end of the
8 connector in proximity to a second node;
9 using the processor to indicate that the second node has been automatically
10 selected;
11 accepting third signals from a user input device to indicate that the end of the
12 connector should be connected to the second node; and
13 using the processor to automatically connect the end of the connector to the
14 second node.

1 5. A method for joining nodes in a diagram, wherein the diagram includes
2 a first node and a second node, the method comprising, the method comprising

3 accepting first signals from the user input device to move the first node into
4 visible contact with the second node; and

5 in response to the moving of the first node into visible contact with the second
6 node, performing the step of using the processor to create a connection between the first and
7 second nodes.

1 6. The method of claim 5, wherein the connection is created at the
2 approximate points of contact of the first and second nodes.

1 7. The method of claim 5, wherein a visual indicator indicates that
2 contact has occurred.

1 8. The method of claim 5, wherein an audible indicator indicates that
2 contact has occurred.

1 9. The method of claim 5, further comprising
2 moving the first node into proximity with the second node to within a
3 predetermined threshold distance; and

4 in response to the step of moving the first node into proximity, performing the
5 step of using the processor to create a connection between the first and second nodes.

1 10. A method for modifying a diagram of nodes in a digital processing
2 system, wherein the diagram includes nodes coupled by connectors, wherein a node
3 represents an operation performed on an image portion, wherein a complex node represents
4 an operation that includes sub-operations, the method comprising

5 accepting signals from a user input device to expand a complex node; and
6 in response to the step of accepting signals to expand a complex node,
7 performing the step of replacing the complex node in the diagram with one or more nodes
8 corresponding to sub-operations of the operation represented by the complex node.

1 11. The method of claim 10, wherein the operations are image processing
2 operations.

1 12. A method for modifying parameter values, the method executing in a
2 digital system, the digital system including a user input device, the method comprising
3 accepting signals from the user input device to define a freehand line drawing;
4 and
5 using the freehand line drawing to modify at least one parameter value.

1 13. The method of claim 12, wherein the freehand line drawing is used to
2 modify the at least one parameter value as a function of time.

1 14. The method of claim 12, wherein the freehand line drawing is used to
2 modify the at least one parameter value as a function of space.

1 15. A method for displaying image information on a display device
2 coupled to a processor and user input device, the method comprising

3 using the processor to display a main image on the display device;
4 generating modified images;
5 accepting signals from the user input device to select a plurality of modified
6 images; and

7 in response to the step of accepting signals, performing the step of displaying
8 the plurality of selected images on the display device adjacent to the main image.

1 16. A method for displaying information about an image in a image
2 processing system, the image processing system including a processor coupled to a display
3 device and to a user input device, the method comprising

4 using the processor to display an image;
5 accepting signals from the user input device to select a portion of the image;
6 and
7 using the processor to display a list of operations that contributed to the
8 generation of the selected portion of the image.

1 17. The method of claim 16, wherein the image portion is a single pixel.

1 18. The method of claim 16, further comprising
2 accepting signals from the user input device to identify an operation in the list;
3 using the processor to regenerate the image using operations in the list other
4 than the identified operation; and
5 displaying the regenerated image on the display device.

1 19. A method for saving a setting in a computer user interface, the method
2 executing in a digital processing system including a processor coupled to at least one user
3 input device and to a display device, the processor executing a user interface including
4 controls for changing parameter values, the method comprising

5 accepting signals from a user input device to provide a new parameter value
6 by using a first control;
7 accepting signals from a user input device to define a first label;
8 associating the label with the new parameter value and with the first control;
9 storing the label in a list of labels associated with the first control;
10 using the processor to display the list of labels;

11 accepting second signals from a user input device to select the first label; and
12 in response to the step of accepting second signals, performing the step of
13 using the new parameter value.

1 20. A method for using a three-dimensional look-up table in a digital storage
2 device to obtain a result, the method comprising
3 selecting a first resolution;
4 using the first resolution to define subcubes in a mapping space,
5 wherein the subcubes have dimensions based on the first resolution;
6 assigning a single output value to each subcube;
7 generating a look-up table in accordance with the subcubes;
8 receiving a first set of three values;
9 using the mapping space to map the first set of three values to a point
10 in the mapping space, wherein if the point is within a given subcube then the result is the
11 assigned output value of the given subcube; and
12 regenerating the look-up table at a different resolution.

1 21. The method of claim 20, wherein the mapping space is multi-dimensional
2 with a number of dimensions greater than 3.
1 22. The method of claim 20, wherein the mapping space is non-rectangular.
1 23. The method of claim 20, wherein multiple subcube resolutions are used
2 for a single mapping space.